INSTALLATION AND OPERATION MANUAL
D10DX.01T – Digital Depth Sounder with Air & Water Temperature, Transom Mount Transducer

HawkEye

To ensure safety and many years of trouble-free operation of your product, please read this manual carefully before using this product.

SAFETY INFORMATION:

- Periodically wipe the face with a dry cloth. Do not use abrasives or solvents on this device.
- Only qualified personnel should perform repairs or servicing not covered in this manual.
- The LCD used in the product is made of glass. Therefore, it can break when the product is dropped or impacted.
- Keep this product away from heat sources such as radiators, heaters, stoves and other heat generating sources. Do not store in extreme temperatures above 150° F (65° C).
- Shade the LCD during storage. Do not expose LCD to direct sunlight for extended periods of time. Use the supplied cover at all times during storage.

NOTES, NOTICES, AND CAUTIONS

⚠ **WARNING:** Indicates a potential for property damage, personal injury or death.

❌ **IMPORTANT:** Indicates potential damage to the device and tells you how to avoid it.

➡ **NOTICE:** Indicates important information that helps you make better use of the device and tells you how to correct a performance problem.

🌐 I**NFORMATION**: Indicates resources to obtain the proper information to help you make the most of your device.

INFORMATION:
Read this manual completely before attempting to use or install your device. Visit our Customer Service Center on our website for advanced troubleshooting and technical support.

WARNING:
This depth sounder should not be used as a navigational aid to prevent grounding, boat damage, or personal injury. Always operate the boat at slow speeds in unfamiliar water, or if you suspect shallow water or submerged objects.

PARTS SUPPLIED IN PACKAGING

The following parts should be included with the display:

- Digital Depth Sounder Display
- White and Black Faces and Bezels (optional on some models, see package for details)
- Display Sun Cover (optional on some models, see package for details)
- Thick Dash Extension Rod (optional on some models, see package for details)
- Flush Mount Bracket and Hardware
- Display Power Harness and Waterproof Fuse Holder Attached to the Unit
- Air Temperature Sensor and Harness Connected to the Display

The following parts should be included with the transducer:

- Transom Mount Transducer with Integrated Temperature Sensor, 30 ft Cable and Connectors
- Transducer Support Bracket with Attached Kick-Up Bracket
- (2) Tapered Plastic Shims
- (2) Cable clamps
- Clam Shell Cable Cover
- (2) #10 x 1.25" self-tapping screws
- (4) #6 x 1/2" self-tapping screws

If any items are missing or damaged, please contact our customer service department.

SELECTING THE PROPER TRANSDUCER INSTALLATION

The D10DX is available with either a Transom Mount *(D10DX.01T)* or a Plastic Thru Hull *(D10DX.06T)* Transducer. This package includes a transom mount transducer that can ONLY be Transom Mounted.

The Transom Mount transducer *(D10DX.01T)* is suitable for the following vessels:
- Outboard, inboard/outboard, single inboard, or jet-drive propulsion.
- Hull dead rise angle below 30°.
- Transom angle from 3-20°.

The Thru Hull Transducer *(D10DX.06T)* is suitable for the following vessels:
- Outboard, inboard/outboard, single or dual inboard, or jet-drive propulsion.
- Hull dead rise angle below 20°.
- Fiberglass or Metal Hull Material. CANNOT be constructed of wood.
- Hull thickness LESS than 1.25" (32 mm)

If you think that the transom mount transducer is not suitable for your installation, return to the place of purchase and exchange for the thru-hull *(D10DX.06T).* You can also visit our Customer Service Center at www.hawkeyelectronics.com to contact us or to complete a transducer exchange request to exchange the transducer for one that is specialized for your vessel. You may also call 888-766-7276 to inquire about exchanging the transducer.

INSTALLING THE DISPLAY

Tools & Supplies Required for Installation

- Electric Drill
- 2" Hole Saw
- Wire Connectors Suitable for Connecting the Power Wire to Your Vessel
- Wire Cutting/Crimping Tool
- Marine Sealant/Caulk

## STEP 1

Installing the Display

1. Find a location on the boat that will allow clear viewing of the display. Keep in mind that the wires for the transducer and power must reach the mounting location.

2. After finding the right location, mark a 2-inch hole. *(If your boat has a pre-cut hole in the dash panel, simply remove the hole plug and proceed to Step 5.)*

IMPORTANT:
Check behind the desired cutting area for wires, switches, etc. that may be damaged during cutting. If these obstructions are present, use masking tape to hold them out of the way during cutting.

3. Cut out the 2-inch hole using the 2" hole saw.

4. Seal any exposed wood with a marine sealant.

5. Insert the display from the front of the panel, feed the wires through the bracket and install the bracket and locking nut from the rear of the panel. Make sure that the face of the display is rotated upright and aligned to your satisfaction for easy viewing from the vessel's helm.
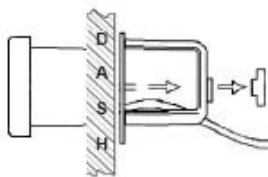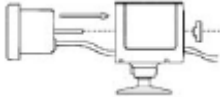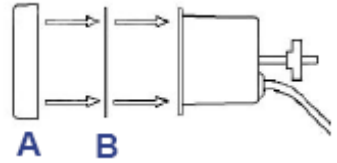
NOTICE:
The display can also be surface mounted using the Adjustable Surface Mount Bracket (1000-10). Please visit our website or contact us by phone for purchase information. You must attach the extension rod to the mounting stud on the back of the display housing before inserting the display into the Surface Mount Bracket.

STEP 2

Installing the Face and Bezel

1. Place the face (B) over the display making sure to line up the cut outs on the face with the notches on the display.

2. While holding the bezel (A), place it over the display and turn clockwise until the bezel locks into place.

A   B

NOTICE:
Gold and Chrome Alloy Bezels can be purchased on our website to match your factory dash or give your Digital Depth Sounder a custom appearance (P/N: 1000.20, 1000.22).

STEP 3

Installing the Air Temperature Sensor

The air temperature sensor is already installed on the back of the display housing and includes a short harness.

- To install simply route the wire so that the end is located in the area where you would like to take air temperature readings.
- Keep in mind that the sensor is located at the end of the harness and should be kept away from direct sunlight, enclosed compartments, and external heat sources.

NOTICE:
The water temperature sensor is located in the transducer. It will be installed and connected during the transducer installation process.

STEP 3

Connecting of the Power Cable

The display has no ON/OFF switch. Therefore, you will need to connect the power harness to a power source that will turn the unit on as power is applied. The key switch or an ON/OFF power switch will be suitable for powering the unit.

1. Connect the BLACK wire in the harness to a negative (-) terminal or suitable ground.

2. Connect the RED wire in the harness to a positive (+) 12 Volt switchable power source (key switch, on/off switch, terminal block, etc).

NOTICE:
Never use "Twist-On" or "Automotive" type connectors. These connectors form a solid electrical connection and are less likely to corrode.

STEP 4

Testing the Display Installation

Before continuing with your installation, you should test the unit to make sure the power wires are properly attached.

1. Apply power to the unit by turning on the power source that you've attached the red and black wires to.

2. The buzzer should beep three times while the display illuminates all the LCD graphics for 2 seconds. "---" will then be shown on the LCD.

If the display operates as per #2 above, continue to the "Basic Operation" section.

If the display does not turn ON:

1. Check the power source using a test light or DC volt meter. Make sure there is 12 volt power where the power harness connects to both the positive and negative sources.

2. Check the fuse holder assembly with a test light or DC volt meter. Connect the ground for the test meter or light to the vessel's negative power source.
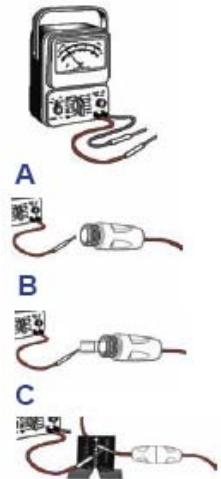
3. Remove the fuse and check for 12 volt power at the spring located inside the fuse housing that is connected to the vessel's power source. If 12 volt power is present continue to the next step. If power is not present, return to Step 1.

4. Insert the fuse and check for 12 volt power at the end of the fuse. If 12 volt power is present continue to Step C. If power is not present, replace the fuse.

5. Reassemble the fuse housing. Strip back a quarter of an inch of wire cover on the display side of the fuse housing and test for 12 volt power. If 12 volt power is present continue to Step 2.D. If power is not present, replace the fuse housing assembly.

6. Visit our Customer Service Center on our website or call 888-766-7276 for advanced technical support.

NOTICE:

The fuse used in the In Dash Depth Sounder is a .25A, 250V fuse. Do not rely on a visual inspection of the fuse to determine if it is functioning. If your depth sounder will not turn on, ALWAYS test the fuse with a test light or voltage meter.

GETTING TO KNOW YOUR DIGITAL DEPTH SOUNDER DEPTH

The unit's auto-ranging, auto-sensitivity features means that you never have to worry about adjustments. Simply turn the power on, and you're ready to go. The Depth Sounder emits sound signals that travel through water, and then calculates the amount of time that elapsed while the signal traveled down to the bottom and returned back to the transducer. This time is calculated by the microprocessor and displayed as a depth reading. Extremely dirty water, very soft bottom, high speeds, deep water, or a combination of the above will result in incomplete or inaccurate readings. Under these conditions variable readings or "- - -" will be displayed.
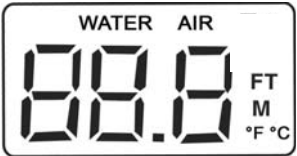

NOTICE:

This depth sounder has a non-volatile memory. ALL settings will be stored when the power is turned OFF.

DISPLAY MODE SELECTION

The unit has 3 user selectable modes:
- Depth Sounder
- Water Temperature
- Air Temperature

To Change the Mode:

1. Press the "UP" Button to change the mode to the Right *(The display will change modes from Depth to Water Temperature to Air Temperature)*
2. Press the "DOWN" Button to change the mode to the Left *(The display will change modes from Depth to Air Temperature to Water Temperature)*

NOTICE:
When a Temperature Mode is selected the Water or Air indicator will flash on the LCD for 5 seconds while the temperature is calculated.

SHALLOW WATER ALARM

The shallow alarm function can be set for depths ranging from 3 to 200 feet and triggers an alarm when the depth is less than the setting. You must be in the "Depth Sounder" mode to adjust this setting.

To set the SHALLOW ALARM (upper alarm):

1. Press and hold the "UP" and "DOWN" keys until the ▼ and ▲ indicators illuminate and the 🛎 icon blinks. *(approximately 3 seconds).*
2. Release the Keys.
3. Press the "UP" key to access the shallow water alarm setting. The 🛎 icon will illuminate and the ▲ indicator will blink.
4. Pressing the "UP" key will increase the selected value. Pressing the "DOWN" key will reduce the value.
5. Pressing and releasing the key will change the value in 1-foot increments per second.
6. Holding down the key will change the value in 9 foot increments per second.
7. After the desired setting is achieved, the display will return to normal operation after 5 seconds.
8. The ▲ and 🛎 indicators will now be illuminated to indicate that a shallow water alarm is set.

When triggered, the alarm sounds an audible buzzer for ten seconds while flashing the warning LED and the ▲ and 🛎 icons on the display. After 10 seconds, the audible alarm mutes and the warning LED and the ▲ and 🛎 icons continue to blink until the depth increases, or the alarm is reset. To reset the alarm repeat steps 1 thru 5.

DEEP WATER ALARM

The deep alarm function can be set for depths ranging from 3 to 200 feet and triggers an alarm when the depth is more than the setting. You must be in the "Depth Sounder" mode to adjust this setting.

To set the DEEP ALARM (lower alarm):

1. Press and hold the "UP" and "DOWN" keys until the ▼ and ▲ indicators illuminate and the 🔔 icon blinks. *(approximately 3 seconds).*

2. Release the Keys.

3. Press the "DOWN" key to access the deep water alarm setting. The 🔔 icon will illuminate and the ▼ indicator will blink.

4. Pressing the "UP" key will increase the selected value. Pressing the "DOWN" key will reduce the value.

5. Pressing and releasing the key will change the value in 1-foot increments per second.

6. Holding down the key will change the value in 9 foot increments per second.

7. After the desired setting is achieved, the display will return to normal operation after 5 seconds.

8. The ▼ and 🔔 indicators will now be illuminated to indicate that a deep water alarm is set.

When triggered, the alarm sounds an audible buzzer for ten seconds while flashing the warning LED and the ▼ and 🔔 icons on the display. After 10 seconds, the audible alarm mutes and the warning LED and the ▼ and 🔔 icons continue to blink until the depth increases, or the alarm is reset. To reset the alarm repeat steps 1 thru 5.

KEEL OFFSET

The Keel Offset feature is used to adjust the depth readings displayed by the device to compensate for the depth of the water required for your vessel to operate safe (*typically referred to as your vessel's "Draft")*

For Example: If your boat's draft is 3 feet, the Keel Offset feature should be set to 3 feet. The device will then subtract 3 feet from the actual depth reading and display this figure as the depth. If the water depth is 5 feet and the Keel Offset is set to 3 feet, the depth will be displayed as 2 feet, indicating to the operator that there is 2 feet of safe operating water.

The maximum Keel Offset setting is 20 FT (6.1 M), and can be set in .1 *(1/10th)* Feet or Meter increments. The unit will read "---" when a negative value occurs due to the Keel Offset subtraction.

To set the Keel Offset:

1. Press and hold the "UP" and "DOWN" keys until the **K/O** indicator begins to blink. *(approximately 6 seconds).*

2. Release the Keys.

3. Press the "UP" key to increase the Keel Offset value. Press the "DOWN" key to reduce the value.

4. The display will return to the normal operation mode after five seconds if no keys are pressed.

5. "K/O" will remain illuminated in the top left hand corner indicating that the depth readings are adjusted to the Keel Offset setting.

UNITS OF MEASURE

The units of measure for the depth readout and alarm functions can be set in 4 easy steps. The two settings available are Feet (FT) and Meters (M). You must be in the "Depth Sounder" mode to adjust this setting.

To Set the Units of Measure:

1. Press and hold the "UP" and "DOWN" keys until the current unit of measure begins to blink. *(approximately 8 seconds).*

2. Release the Keys.

3. To set the units to FEET press the "UP" key. "FT" will flash on the Display.

4. To set the units to METERS press the "DOWN" key. "M" will flash on the Display.

5. The display will return to the normal operation mode automatically after five seconds.

IMPORTANT:
Install and test the display in the desired mounting location before attempting the transducer installation.

Tools & Supplies Required for Installation

- Power Drill
- 3/4"" (19 mm) drill bit, hole saw or spade bit
- 1/8" (3 mm) drill bit
- 9/64" (4 mm) drill bit
- Marine Sealant/Caulk
- 30 Grit Sandpaper
- "Phillips" Screwdriver
- Pencil
- Tie Wraps
- Water Based Antifouling Paint
- Masking Tape

Transom mounting is suitable for the following vessels:
- Outboard, inboard/outboard, single inboard, or jet-drive propulsion.
- Hull deadrise angle below 30°.
- Transom angle from 3-20°.

NOTICE:

To get a good "view" of the mounting location, while the vessel is out of the water, position yourself at the transom and look at the bottom of the hull towards the bow. Using illustrations A thru I, note anything that could interrupt the clean flow of water to the transducer mounting location.

NOTICE:

To achieve maximum performance try the following:

Have someone run the boat on plane for you in smooth water. CAREFULLY look over the transom at the water flowing from the bottom of the boat. Find the location which produces the least amount of turbulence (air bubbles). This is the location you will want to mount the transducer.
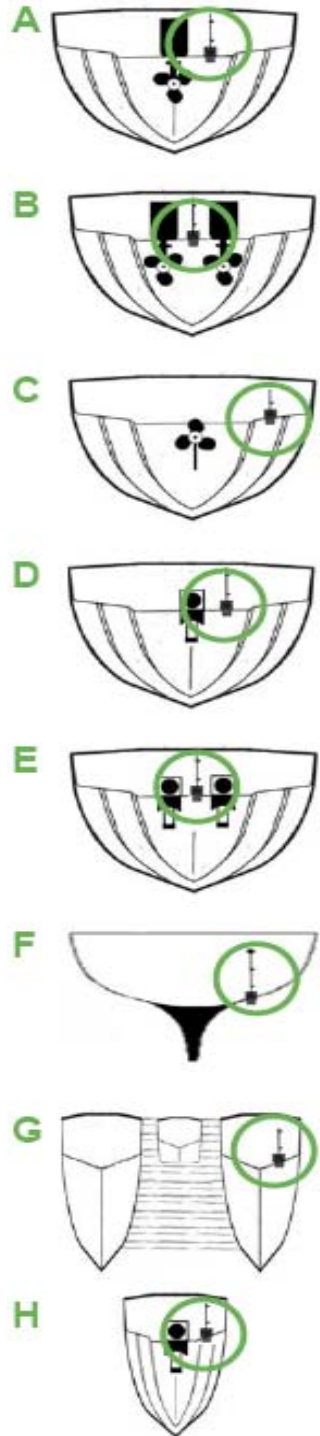
NOTICE:

To prevent drilling holes too deeply, wrap masking tape around the bit 7/8" (22 mm) from the point. To minimize surface cracking on fiberglass hulls use a chamfer or countersink bit. If either is not available, start drilling with a 1/4" (6 mm) bit to a depth of 1/16" (1 mm), then finish the hole with the 9/64" (4mm) bit.

STEP 1

Choosing a Mounting Location

To obtain the best performance, the transducer should be mounted in a location where the water flow beneath the hull is aeration and turbulence-free. Try to mount the transducer as close to the centerline of the boat as possible. Consult the boat manufacturer for the best in-hull transducer placement. If this information is unavailable, follow the guidelines below.

A. On a single drive outboard or inboard/outboard boat, mount on the starboard side at least 4" beyond the radius of the propeller.

B. On a twin outboard or inboard/outboard boat, mount between the drives, making certain that the transducer is not directly in front of either drive or propeller (avoid aligning directly in line with the bottom of the boat if the hull comes to a point).

C. On an inboard boat, mount as far to the port or starboard as possible so that the propeller turbulence does not affect the performance of the sensor.

D. On a single jet drive boat, mount on the starboard side at least 4" outside the intake grate.

E. On twin jet drive boats, mount on the center line, between the intake grates (avoid aligning directly in line with the bottom of the boat if the hull comes to a point).

F. On sailboats, mount on the starboard side at least 6" outside the keel.

G. On pontoon boats and catamarans, mount on the starboard hull at least 2" outside the hull protector or centerline.

H. On PWC's, mount on the starboard side, at least 2" outside the intake grate.

Mounting Location **"DONT's"**

Never install the transducer where the boat may be supported during trailering, launching, hauling, or storage.

NEVER MOUNT:

A. Behind water intakes, discharge openings, or thru-hull fittings.

B. Behind strakes, struts, or hull irregularities.

C. Behind transom steps or pockets.

D. Behind eroding paint, hull deformities, or marine growth.

E. Behind rivets or strakes on aluminum boats.

F. Behind the step on stepped hulls.

G. Directly on the "V" in the hull.

H. Behind propellers or anywhere propeller turbulence will interrupt the flow of "clean" water to the transducer.

I. In areas where the hull has a reverse angle.
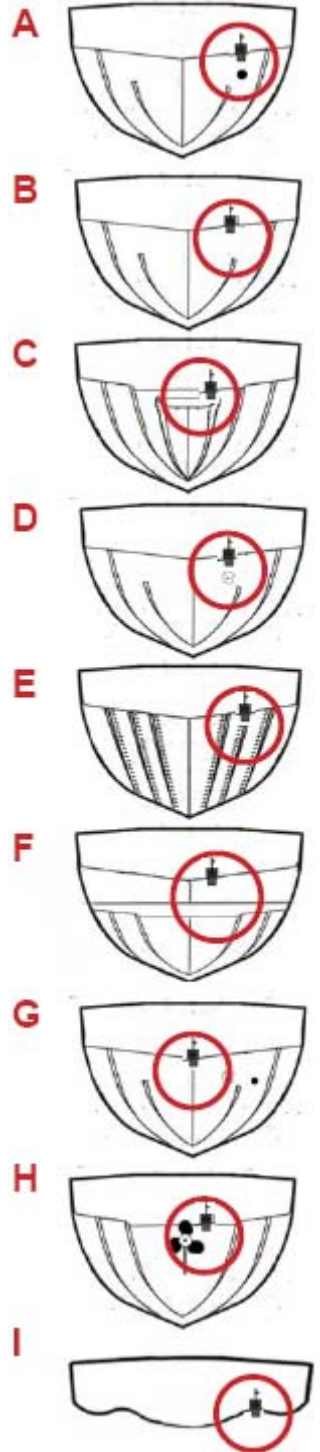
STEP 2

Assembling the Transom Mount Bracket

1. With the Locking Tab in the up position, align the transducer and bracket, then slide the transducer into the Pivot Bracket until it cannot slide any further *(minimal force is required) (illustration A).*

2. Press the Locking Tab down against the Pivot Bracket until it locks firmly into place.

3. Slide the Pivot Bracket arms through the back of Screw Bracket as pictured. *(illustration B).*

4. Grasp the transducer in your hand as shown in the picture to the right. Rest the screw bracket against a solid object (ground) and press the Pivot Bracket into the Screw Bracket with enough force until it snaps into place *(illustration C).*

A

NOTICE:

To unlock the locking tab use a flat head screwdriver to pry the tab up.

B

C
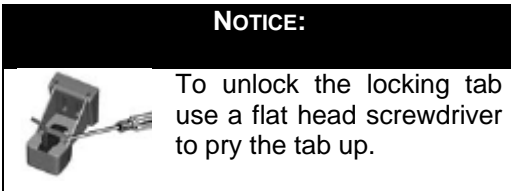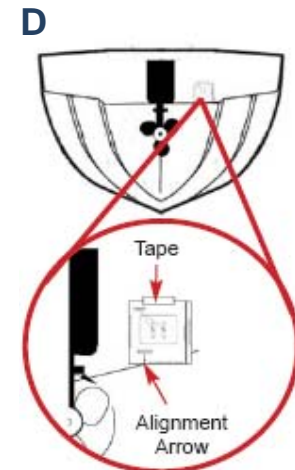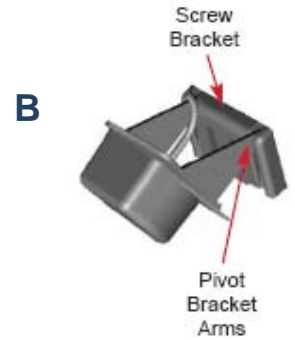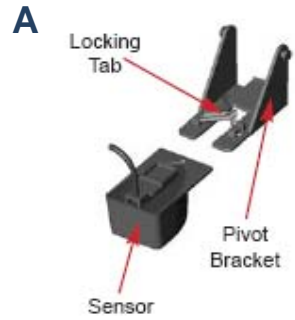
STEP 3

Mounting the Transom Mount Bracket

1. Locate Transom Template inserted in this manual.
2. At the desired mounting location, position the template so the arrow at the bottom is aligned with the bottom edge of the vessel making certain that the template is parallel to the waterline of the vessel.
3. Using a 9/64" (4 mm) drill bit, drill two holes 7/8" (22 mm) deep at the locations indicated on the template marked with an "X".

D

4. The bracket is designed for a standard 13° transom angle. To determine if the plastic shim is needed, position the transducer at the desired location. Using a straight edge, compare the underside of the transducer relative to the underside of the hull. The stern (trailing edge) of the transducer should be 1/16" - 1/8" (1 - 3 mm) below the bow (leading edge) of the sensor.

5. Apply a marine sealant to the threads of the two #10 x 1-1/4" self-tapping screws and screw the bracket to the hull. DO NOT tighten the screws completely until you position the transducer as per # 4 above.

NOTICE

Do not allow the leading edge of the transducer to extend more than 1/8"(3 mm) of an inch below the bottom of the boat as this will create increased aeration and turbulence.
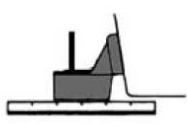

NOTICE:

Align the included shims to achieve a slight angle as per the illustration below. To prevent aeration, NEVER position the transducer in a manner that the Leading Edge *(bow)* is LOWER than the Trailing Edge *(stern).*
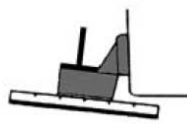

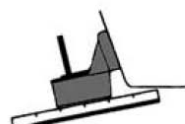| CORRECT	INCORRECT		
Slight Angle	Parallel	Reversed Angle	Too Steep of An Angle

STEP 4

Cable Routing

Route the transducer cable over the transom, through a deck or splash-well drain hole or through a new hole drilled in the transom. If a new hole is required, it MUST be drilled well above the waterline.

To Drill a Cable Pass Through:
1. Mark the desired location with a pencil.
2. Check for obstructions behind the desired location inside the hull.
3. Drill a 3/4" or 19 mm hole through the transom.
4. Route the cable through the transom.
5. On the outside of the hull, secure the cable against the transom using the included cable clamps. Evenly distribute the clamps between the transducer and the location where the cable passes through or over the hull and mark the location with a pencil.
6. At the marked locations, use a 1/8" (3 mm) bit to drill a hole 3/8" (10 mm) deep.
7. Apply marine sealant to the threads of the 2 #6 x 1/2" self-tapping screws, position the two cable clamps and fasten them in place *(illustration A).*

A

Skip to #12 if the cable was routed over the transom or a hole that was already in the hull.

8. If a hole has been drilled in the transom for the cable pass through, position the clam shell cover over the cable where it enters the hull and mark the two screw holes.

B

9. Use a 3 mm or 1/8" bit to drill a hole 10 mm (3/8") deep. To prevent drilling too deeply, wrap masking tape around the bit 10 mm (3/8") from the point of the bit.

C

10. Fill the remaining space in the hole with marine sealant *(illustration B).*
11. Apply marine sealant to the 2 #6 x 1/2" self-tapping screws and fasten the cable clam shell cover into place *(illustration C).*
12. Route the cable to the mounting location of the depth sounder transducer plug. To reduce electrical interference, separate the transducer cable from other electrical wiring. Coil any excess cable and secure it in place using tie wraps.

D

13. Lubricate the plug by applying a generous amount of silicon grease or petroleum jelly to the ridge on the Display plug *(illustration D)*

Lubricate Here

14. Plug the cable into the transducer plug on the depth sounder.

If you need to increase the length of the transducer cable order part # 8000-90 from our website or toll free at 888-766-7276. Strip back the rubber cable cover 1" (28 mm) exposing the three internal wires (blue, white, and bare) on your transducer. Using a soldering iron, solder the blue, white and bare wires from the 8000-90 extension cable to the corresponding wires on your transducer. Using electrical tape, or heat shrink tubing make certain that the soldered connections are completely sealed and protected against accidental electrical interference and corrosion. **Cutting the plug off the Digital Depth Sounder display will void the warranty.**

STEP 5

Antifouling Paint

Marine growth can accumulate rapidly on the transducer's surface. If the vessel is left in saltwater for extended periods of time, all components of the transducer below the waterline must be painted with WATER BASED antifouling paint.

- Never use ketone-based paint, as this type of paint can damage the transducer's plastic shell.
- Clear, spray-on antifouling paints are very easy to apply and can be purchased from your local boating supply store.
- Reapply paint as needed to prevent marine growth

STEP 6

Testing and Troubleshooting the Transom Mount Installation

1. Make sure that the display is functioning properly by following the display testing procedures in the Display Installation and Operation Manual.

2. Place the vessel in the water. Once the display is turned ON, it will display the test sequence and then display the current depth.

3. Become familiar with the depth sounder's function and performance at idle speeds.

4 Gradually increase the boat speed and observe the depth readings *(pay attention to minimum and maximum depth capabilities).*

5. If "---" readings appear:

- Check to make sure that the transducer is not "kicked-up". To prevent damage to the transducer, it will automatically release from the mounting bracket (kick-up) when it is impacted. If this occurs, refer to Page 4 of this manual to reset the transducer for normal operation. If this happens frequently, make sure that the trailer or boat lift bunks do not interfere with the transducer during loading and unloading.
- Have someone run the boat on plane for you in smooth water. CAREFULLY look over the transom at the water flowing from the bottom

of the boat over the base of the transducer. The water should be "Clean" with very little turbulence (air bubbles). If there are any air bubbles or turbulence seen passing underneath the transducer, move the transducer farther down on the transom bracket. If the performance does not improve, move the transducer to "Clean Water" making sure to fill any unused screw holes with marine sealant.

NOTICE

High Speed performance of the depth sounder may require extensive adjustment and testing to find the best transducer mounting location. This transducer has been tested to perform up to 63 MPH in an In-Hull application. Not all boat hull configurations will allow for this type of performance. If you are not satisfied with the performance of the depth sounder, it is recommended that you seek the advice of a professional marine electronics installer.

TROUBLESHOOTING AND FREQUENTLY ASKED QUESTIONS

24-Hour Technical Support is available online at hawkeyeelectronics.com. Search our online Knowledgebase for the latest troubleshooting and FAQ's, or post your own question for our support staff. For one-on-one support please email customerservice@norcrossmarine.com.

INFORMATION:

If you have questions about this device please visit our Customer Service Center on our website or *call us toll free at 888-766-7276.*

Warranty Details • Warranty Registration

Troubleshooting • Product Knowledgebase

Product Specifications • Parts & Accessories

www.hawkeyeelectronics.com

REPLACEMENT PARTS

Individual components are not available for sale on our website. If you need replacement parts, please email or call our customer service department.

WARRANTY

This device is covered by a 2 Year Limited Warranty. To be eligible for warranty coverage, you must register your product within 15 days of purchase. Visit our website for warranty details and to register.

- To Activate Your Warranty:
- Read and print out a copy of the warranty details for your records.
- Complete the registration form our website.
- Make a copy of your original purchase receipt and staple it to this manual. *You will need to present it in the rare occurrence that you need to send your product in for service.*
- Complete the information below and store this manual in a safe place. *You can print additional copies of this manual from our website.*

INFORMATION:
To aid in maintenance and service, record the following:
Date of Purchase: _____
Place of Purchase: _____
Date of Online Warranty Registration: _____
Production Date Code : _____ *(3 digit code located on the device housing)*

LEGAL

INFORMATION:
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IMPORTANT:

If printing this manual from a computer, make sure that your printer does not adjust the size of this template by aligning the template with the kickup bracket. If the sizes are different, check your printer settings to make sure the print size is 100% with no scaling.

Drill Mounting Holes Here

CENTERLINE OF VESSEL (Keel, Drive)

X   X

STARBOARD SIDE OF VESSEL

This Line Vertical

Align Arrow Tip w/ Bottom of Boat

This Line Parallel To Vessel's Waterline